

DRILL HOLES

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ORDER REV. DATE: June 1, 2004

### PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF US 40 AND ROBIN HOOD ROAD IN HARFORD COUNTY. US 40 IS ASSUMED TO RUN IN A EAST-WEST DIRECTION.

### INTERSECTION OPERATION

THE INTERSECTION CURRENTLY OPERATES IN A NEMA FOUR-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH AN EXCLUSIVE LEFT TURN PHASE FOR EASTBOUND US 40. VIDEO DETECTION WILL BE USED. THIS SIGNAL IS INTERCONNECTED WITH THE EXISTING TRAFFIC SIGNAL AT US 40 AND MD 132.

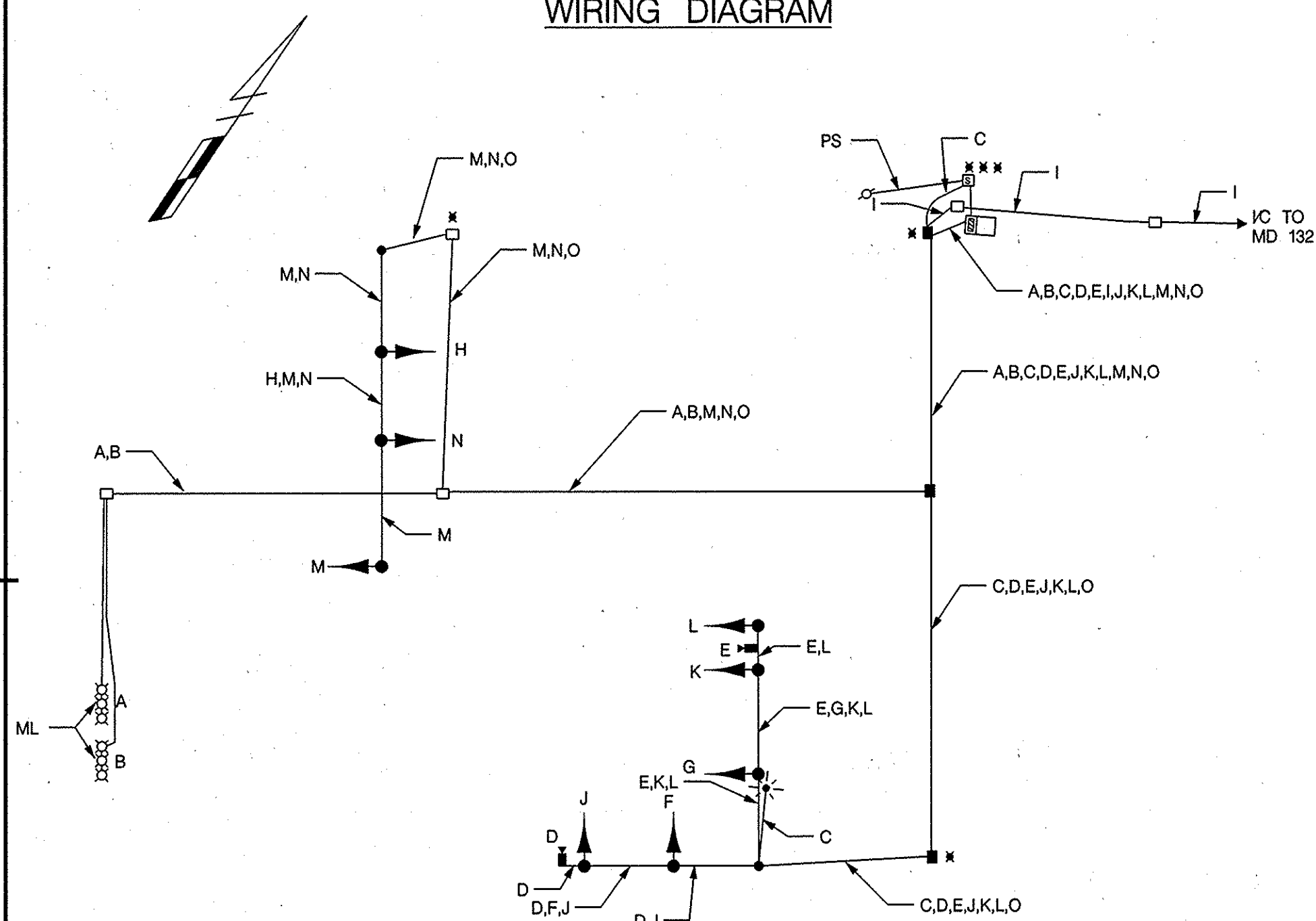
### CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE, ONE (1), FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER AND VIDEO DETECTION INTERFACE EQUIPMENT HOUSED IN A NEMA "6" BASE MOUNTED CABINET.

### SPECIAL NOTE

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF THE MSHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR MUST PROVIDE MR. SNYDER WITH THE NEAREST ADDRESS, ZIP CODE, AND PHONE NUMBER.

### WIRING DIAGRAM



### WIRING KEY

A-B	EXISTING MICRO-LOOP PROBE LEAD-IN
C	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
D-E	VIDEO DETECTION CABLE
F-H	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
I	INTERCONNECT CABLE
J-N	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
O	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
P-R	1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
PS	PROPOSED ELECTRIC SERVICE
X	GROUND ROD

### EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY THE SHA AND INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

### EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR. ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO THE OFFICE OF TRAFFIC AND SAFETY FOR APPROVAL PRIOR TO INSTALLATION.

QUANTITY	DESCRIPTION
LS	MAINTENANCE OF TRAFFIC
3 CY	TEST PIT EXCAVATION
35 LF	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
2 EA	FURNISH AND INSTALL 300 FT. VIDEO DETECTION CABLE
2 EA	ADJUST EXISTING HANDHOLE TO FINAL GRADE
26 EA	FURNISH AND INSTALL 12 IN. VEHICULAR SIGNAL HEAD SECTION
1 EA	FURNISH AND INSTALL 15 FT. STREET LIGHTING ARM
1 EA	FURNISH AND INSTALL 250 WATT HPSV LUMINAIRE
1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
1 EA	FURNISH AND INSTALL 50 FT. MAST ARM AND POLE
1 EA	FURNISH AND INSTALL 50 FT./60 FT. TWIN MAST ARMS AND POLE
LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
2 EA	FURNISH AND INSTALL VIDEO DETECTION CAMERA
1 EA	FURNISH AND INSTALL VIDEO INTERFACE EQUIPMENT
70 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
250 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - BORED
30 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
10 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
440 LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER WIRE
1 EA	FURNISH AND INSTALL METERED SERVICE PEDESTAL
100 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 A.W.G.)
3 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
6 EA	FURNISH AND INSTALL GROUND ROD 3/4 IN. DIAMETER X 10 FT. LENGTH
80 LF	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 A.W.G.)
1500 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 A.W.G.)
250 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR (NO. 12 A.W.G.) - TRAY CABLE
1 EA	FURNISH AND INSTALL BASE MOUNTED CABINET AND CONTROLLER
1 EA	FURNISH AND INSTALL 4-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
2 EA	FURNISH AND INSTALL D3-2 DUAL FACE SIGN (VAR. X 16") - MAST ARM MOUNT
1 EA	FURNISH AND INSTALL M95-V03-2 SIGN (72" X 40") - MAST ARM MOUNT
350 LF	REMOVE AND REINSTALL EXISTING CABLE
525 LF	FURNISH AND INSTALL 12 PAIR VOICE GRADE INTERCONNECT CABLE
25 LF	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
1 EA	OUT, CLEAN, GALVANIZE AND CAP MAST ARM POLE
1 EA	FURNISH AND INSTALL R10-11a SIGN (24"X30") MAST ARM MOUNT

### EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

### NOTE:

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL ASSOCIATED EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

### CONTACT PERSONS FOR DISTRICT 4 ARE AS FOLLOWS:

MR. RANDALL SCOTT  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
(410) 321-2781

MR. STEVE MARCISZEWSKI  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
(410) 321-2761

MR. PASQUARELLO  
ASSISTANT DISTRICT ENGINEER - UTILITIES  
(410) 321-2841

### CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF, SR.  
CHIEF, TRAFFIC OPERATIONS  
(410) 787-7630

MR. EUGENE BAILEY  
TEAM LEADER SIGN OPERATIONS  
(410) 787-7676

MR. ROBERT SNYDER  
ASSISTANT DIVISION CHIEF,  
TRAFFIC OPERATIONS  
(410) 787-7631

MS. DARLENE EIDE  
SUPPLY OFFICE  
SIGNAL SHOP WAREHOUSE  
(410) 787-7668

MR. ED RODENHIZER  
TEAM LEADER SIGNAL OPERATIONS  
(410) 787-7652

### PHASING CHART

	1	2	3	4	5	6	7	8
PHASE 1 & 6	←G→	←G→	G	G	R	R	R	R
1 & 6 CHANGE	←Y→	←Y→	Y	Y	R	R	R	R
PHASE 2 & 6	←R→	←R→	G	G	G	G	R	R
2 & 6 CHANGE	←R→	←R→	Y	Y	Y	Y	R	R
PHASE 4	←R→	←R→	R	R	R	R	G	G
4 CHANGE	←R→	←R→	R	R	R	R	Y	Y
FLASHING OPERATION	FLR	FLR	FLY	FLY	FLY	FLY	FLR	FLR



**TRAFFIC CONCEPTS, INC.**  
325 Gambrills Road  
Suite E  
Gambrills, MD 21054  
(410) 923-7101  
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**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
**GENERAL INFORMATION PLAN**  
US 40 AND ROBIN HOOD ROAD

SCALE	NONE	DATE	5-22-06	CONTRACT NO.	BW996M82
DESIGNED BY	T. ZAYDEL	COUNTY	HARFORD		
DRAWN BY	T. ZAYDEL	LOGMILE	12040014.76		
CHECKED BY	K. SCHMID	T.I.M.S. NO.	H. 613		
F.A.P. NO.	NA	TOD NO.			
DRAWING NO.	TS-1183F GI	SHEET NO.	3	OF	3